



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,980	06/25/2003	Wallis Allen Dague	STL11060	3874

7590 11/10/2004

Derek J. Berger, Seagate Technology LLC
Intellectual Property - COL2LGL
389 Disc Drive
Longmont, CO 80503

EXAMINER

CHEN, TIANJIE

ART UNIT	PAPER NUMBER
----------	--------------

2652

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

DT

Office Action Summary

Application No.

10/603,980

Applicant(s)

DAGUE ET AL.

Examiner

Tianjie Chen

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 10 and 16 is/are rejected.
- 7) ☒ Claim(s) 2-9, 11-15 and 17-20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/25/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

Non-Final Rejection

Claim Rejections - 35 USC § 112

1. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites the limitation "the plurality of holes." There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 10, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Macpherson et al (US 2002/0167763).

Claim 1: Macpherson et al shows an actuator body in Figs 1 and 2 for use in an actuator assembly carrying a transducer over a data storage disc, the actuator body including: an actuator arm section (Fig. 2) for supporting the transducer; and a fantail section 124+126+128 having a first leg 126 and a second leg 128, the first leg having a first thermal restraint feature (First filler; [0026], lines 1-3 and [0027] lines 6-7), and the second leg having a second

Art Unit: 2652

thermal restraint feature (Second filler), wherein the first and second thermal restraint features are configured to engage an over-mold 120 ([0025]) when the over-mold is over-molded over the fantail section, and the first and second thermal restraint features are located to prevent the over-mold from separating from the fantail section as a result of the over-mold and the actuator body each having a different coefficient of thermal expansion ([0013]).

Claim 10: as described above, Macpherson et al shows an actuator assembly for use in a data storage device including: a voice coil 118 ([0023]); an actuator having a fantail section including a first leg and a second leg forming a yoke for receiving the voice coil therebetween, wherein the first leg has a first thermal restraint feature, and the second leg has a second thermal restraint feature; and an over-mold on the fantail section that surrounds the first and second legs and holds the voice coil, wherein the first and second thermal restraint features are located such that the over-mold engages with the first and second thermal restraint features to prevent the over-mold from separating from the actuator as a result of the over-mold and the actuator each having a different coefficient of thermal expansion.

Claim 16: as described above, Macpherson et al shows an actuator body for use in an actuator assembly carrying a transducer over a data storage disc, the actuator body including: an actuator arm section for supporting the transducer; and a means for reducing thermal stress that is configured to engage an over-mold, wherein the reducing means is configured to reduce thermal stress caused by the over-mold and the actuator each having a different coefficient of thermal expansion.

Allowable Subject Matter

3. Claims 2-9, 11-15, 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

- With regard to claims 2 and 11, as the closest reference, Macpherson et al (US 2002/0167763) shows an actuator body having a fantail section having a first leg and a second leg, the first leg having a first thermal restraint feature and the second leg having a second thermal restraint feature, wherein the first and second thermal restraint features are configured to engage an over-mold when the over-mold is over-molded over the fantail section, and the first and second thermal restraint features are located to prevent the over-mold from separating from the fantail section as a result of the over-mold and the actuator body each having a different coefficient of thermal expansion; but **fails to show that** the first leg further includes a third thermal restraint feature, and the second leg further includes a fourth thermal restraint feature, and the third and fourth thermal restraint features are located to prevent the over-mold from separating from the fantail section as a result of the over-mold and the actuator body each having a different coefficient of thermal expansion.
- With regard to claims 3-8, 12-15, 17-20; as the closest reference, Macpherson et al (US 2002/0167763) shows an actuator body having a fantail section having a first leg and a second leg, the first leg having a first thermal restraint feature and the second leg having a second thermal restraint feature, wherein the first and second thermal restraint

features are configured to engage an over-mold when the over-mold is over-molded over the fantail section, and the first and second thermal restraint features are located to prevent the over-mold from separating from the fantail section as a result of the over-mold and the actuator body each having a different coefficient of thermal expansion; but **fails to show that** the first thermal restraint feature includes a first hole that is in the first leg and extends through the first leg, the second thermal restraint feature includes a second hole that is in the second leg and extends through the second leg, and wherein the first hole and the second hole are arranged to engage the over-mold such that the over-mold extends through both the first hole and the second hole (Claims 3 and 12); or a plurality holes (Claims 14, 17, 18, and 19); or second pin/pins (Claims 4, 13, and 20); or first wall and second wall (Claim 5); or circular shape (Claims 6 and 18) or the first thermal restraint feature is positioned approximately equidistant distal and proximal ends of the first leg, and the second thermal restraint feature is positioned approximate equidistant distal and proximal ends of the second leg (Claims 7 and 15); or the first thermal restraint feature includes a first hole that is in the first leg and extends through the first leg, the second thermal restraint feature includes a second hole that is in the second leg that extends through the second leg, the third thermal restraint feature includes a third hole that is in the first leg and extends through the first leg, the second thermal restraint feature includes a fourth hole that is in the second leg and extends through the second leg, and wherein the first, second, third, and fourth holes are arranged to engage the over-mold

Art Unit: 2652

such that the over-mold extends through the first, second, third, and fourth holes (Claim 8).

- Applicant asserts that in this device, over-mold material fills these holes and effectively minimizes coil popping from occurring thus minimizing off-track writes due to coil popping phenomenon (Specification, p. 2, lines 19-21).

Conclusion

4. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2652

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen Tianjie
TIANJIE CHEN /10/28/2004
PRIMARY EXAMINER